Appendix E
Final CHART Assessment for the Southern California (SC) Steelhead ESU

ESU Description

The SC Steelhead ESU was listed as an endangered species in 1997 (62 FR 433937; August 18, 1997) and then re-evaluated and its range extended in 2002 (67 FR 21586; May 1, 2002. The SC Steelhead ESU includes all naturally spawned populations in coastal river basins from the Santa Maria River in San Luis Obispo County southward to the U.S. - Mexican Border (67 FR 21586). Major coastal watersheds occupied by naturally spawning fish in this ESU include the Santa Maria River, Santa Ynez River, Ventura River, and the Santa Clara River. Several smaller streams in Santa Barbara, Ventura and northern Los Angeles County also support steelhead, as do two watersheds (San Juan Creek and San Mateo Creek) in southern Orange County and northern San Diego County. These southernmost populations are disjunct in distribution and are separated from the northernmost populations by approximately 80 miles. Following an updated status review (NMFS 2003a), NMFS proposed that the ESU remain listed as an endangered species (69 FR 33102; June 14, 2004), but also proposed that resident O. mykiss co-occurring with anadromous populations below impassable barriers (both natural and man made) be included in the ESU. NMFS recently determined that a 6-month extension in making a final listing determination for this and all other west coast steelhead/O. mykiss ESUs was warranted (70 Fr 37219). A Technical Recovery Team has been formed for the South-Central coast of California and is in the process of identifying the historical and extant independent population structure of this ESU, as well as the associated viability criteria for these populations.

CHART Area Assessments

The preliminary CHART assessment for this ESU (NMFS 2004b) was prepared to support our December 10, 2004, critical habitat proposal (69 FR 71880). This final CHART assessment considered new information received during the public comment period regarding fish distribution, habitat use, and watershed conservation ratings. Based on this new information, as well as information from the California Department of Fish and Game, changes were made to the distribution of occupied habitat in several watersheds. These changes resulted in an overall reduction of occupied fish habitat for the ESU, and in several instances resulted in HSA watersheds being changed from

occupied habitat to unoccupied habitat. Specifically, these changes resulted in the following: 1) a reduction of 24 occupied stream miles from HSA 331440 (Alamo Pintado and Santa Aguedo Creeks), 2) a reduction of approximately 0.8 miles of habitat in HSA 331534 (Santa Monica estuary), 3) a reduction of approximately 20 miles of occupied habitat in HSA 440232 (San Antonio Creek and tributaries), 4) a reduction of approximately 5 miles of occupied habitat in HSA 440331 (Pole Creek), 5) the change of 5 HSAs from occupied to unoccupied in the San Juan Creek/Trabuco Creek watershed (HSAs 490121, 490122, 490125, 490126, and 490128), 6) a reduction of approximately 12 miles of occupied habitat in HSA 490123 (Trabuco Creek), and 7) a reduction of approximately 5 miles of occupied habitat in HSA 490140 (Devil Creek in upper San Mateo Creek watershed).

The final CHART assessment for the SC Steelhead ESU addressed 8 Hydrologic Units (HUs) or subbasins containing 32 occupied HSAs (Figures E1 and E2). The HSAs were chosen as freshwater critical habitat units because they provided a convenient and systematic way to organize the CHART's watershed assessments for this ESU. Information presented below for individual HUs or subbasins (size, counties, total stream miles, occupied stream miles, and habitat use) were generated from GIS data sets compiled by the NMFS Southwest Region and can be found in Table E1.

Unit 1. Santa Maria River Subbasin (HU 3312)

The Santa Maria River HU is located in the northwestern portion of the ESU and includes the Santa Maria River watershed, including the Sisquoc and Cuyama tributaries upstream. The HU encompasses an area of approximately 704 mi^2 and occurs in Santa Barbara and San Luis Obispo Counties. The HU contains 3 HSAs, all of which are occupied, and approximately 1,079 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify approximately 220 miles of occupied riverine habitat in the 3 occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E1 depicts the specific areas in this HU that are occupied by the ESU and were considered for critical habitat designation. The CHART did not identify any unoccupied areas in this subbasin that

may be essential for the conservation of the ESU.

Unit 2. Santa Ynez Subbasin (HU 3314)

The Santa Ynez HU is located in the northwestern portion of the ESU and includes the Santa Ynez River watershed. The HU encompasses an area of approximately 485 mi^2 and occurs entirely in Santa Barbara County. The HU contains 6 HSAs, 5 of which are occupied, and approximately 720 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify approximately 114 miles of occupied riverine habitat in the 5 occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E2 depicts the specific areas in this HU that are occupied by the ESU and were considered for the critical habitat designation.

The CHART also concluded that inaccessible reaches of the Santa Ynez River and its tributaries above Bradbury Dam may be essential to the conservation of this ESU. The team reached this conclusion because historical records indicate that the upper portion of the Santa Ynez watershed above Bradbury Dam provided the principal spawning and rearing habitat for a historically large anadromous steelhead population prior to construction of the dam. Because of the large size of the Santa Ynez river system, it is likely to have historically supported one or more independent populations which contributed to the resiliency of the ESU and served as a buffer against extinction. The currently occupied habitat areas within the range of this ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in the Santa Ynez River may be necessary to reduce the extinction risk for this ESU.

Unit 3. South Coast Subbasin (HU 3315)

The South Coast HU is located in the northwestern portion of the ESU and includes several small streams including Arroyo Hondo, Mission Creek, and Carpinteria Creek. That portion of the HU within the ESU encompasses an area of approximately 375 mi^2 and occurs primarily in Santa Barbara County. The HU contains 5 HSAs, all of which

are occupied, and approximately 620 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography), although most of the stream miles are in one HSA. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 149 miles of occupied riverine habitat in the 5 occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E3 depicts the specific areas in this HU that are occupied by the ESU and were considered for critical habitat designation. The CHART did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 4. Ventura River Subbasin (HU 4402)

The Ventura River HU is located in the northwestern portion of the ESU and includes the Ventura River and its associated tributaries. That portion of the HU within the ESU encompasses an area of approximately 162 mi^2 and occurs entirely in Ventura County. The HU contains 4 HSAs, all of which are occupied, and approximately 296 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify approximately 48 miles of occupied riverine habitat in the 4 occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E4 depicts the specific areas in this HU that are occupied by the ESU and were considered for critical habitat designation.

The CHART also concluded that inaccessible reaches of Matilija Creek and its tributaries above Matilija Dam and inaccessible reaches of Coyote and Santa Ana Creeks above Casitas Dam may be essential to the conservation of this ESU. The team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Matilija and Casitas Dams provided the principal spawning and rearing habitat for a historically large anadromous steelhead population within the Ventura River watershed prior to construction of the dams. Because of the relatively large size of the Ventura

River watershed, it is likely to have historically supported one or more independent populations prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against extinction. The currently occupied habitat areas within the range of this ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the ones that historically occurred in the Ventura River watershed may be necessary to reduce the extinction risk of this ESU.

Unit 5. Santa Clara - Calleguas Subbasin (HU 4403)

The Santa Clara - Calleguas HU is located in the northwestern portion of the ESU and includes the Santa Clara River and its tributaries including Sespe Creek. That portion of the HU within the ESU encompasses a large area of approximately 1,236 mi^2 and occurs primarily in Ventura and Los Angeles Counties. The HU contains 14 HSAs, only 6 of which are occupied, and approximately 1,839 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify approximately 177 miles of occupied riverine habitat in the occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E5 depicts the specific areas in this HU that are occupied by the ESU and were considered for critical habitat designation

The CHART also concluded that inaccessible reaches of Piru Creek and its tributaries above Santa Felicia Dam may be essential to the conservation of this ESU. The team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Santa Felicia Dam provided the principal spawning and rearing habitat for a historically large anadromous steelhead population within the Santa Clara River watershed prior to construction of the dam. Because of the large size of the Santa Clara River watershed, it is likely to have historically supported one or more independent populations prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against its extinction. The currently occupied habitat areas within the range of this ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in the Santa Clara River watershed may be necessary to

reduce the extinction probability of this ESU.

Unit 6. Santa Monica Bay Subbasin (HU 4404)

The Santa Monica Bay HU is located in the northwestern portion of the ESU and includes Topanga Creek, Malibu Creek, and Arroyo Sequit. That portion of the HU within the ESU encompasses a large area of approximately 328 mi^2 and occurs primarily in Los Angeles County. The HU contains 29 HSAs, only 3 of which are occupied, and approximately 222 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 11 miles of occupied riverine and/or estuarine habitat in the occupied HSAs (Table E1). The CHART concluded that these occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied riverine/estuarine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E6 depicts the specific areas in this HU that are occupied by the ESU and were considered for the critical habitat designation.

The CHART also concluded that inaccessible reaches of Malibu Creek above Rindge Dam may be essential to the conservation of this ESU. The team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Rindge Dam provided the principal spawning and rearing habitat for an important anadromous steelhead population within the Malibu River watershed prior to construction of the dam. Because of the size of this watershed, it is likely to have historically supported an independent population prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against its extinction. The currently occupied habitat areas within the range of this ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in Malibu Creek may be necessary to reduce the extinction risk of this ESU.

Unit 7. Calleguas Subbasin (HU 4408)

The Calleguas HU is located in the northwestern portion of the ESU and includes Calleguas Creek and estuary. That portion of the HU within the ESU encompasses a large area of approximately 344 mi^2 and occurs primarily in Ventura County. The HU

contains 12 HSAs, only 2 of which are occupied, and approximately 463 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 1 mile of occupied estuarine habitat in one of occupied HSAs (Table E1). Mugu Lagoon, which constitutes the other occupied HSA, is also utilized by the ESU. The CHART concluded that the occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied estuarine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E7 depicts the specific areas in this HU that are occupied by the ESU and were considered for critical habitat designation.

Unit 8. San Juan Subbasin (HU 4901)

The San Juan HU is located in the southern portion of the ESU and includes the San Juan Creek and San Mateo Creek watersheds which have recently been recolonized by Steelhead.. That portion of the HU within the ESU encompasses an area of approximately 496 mi^2 and occurs primarily in portions of Orange, Riverside, and Orange Counties. The HU contains 18 HSAs, only 3 of which are occupied, and approximately 743 stream miles within the portion of the HU that lies within the ESU (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 21 miles of occupied riverine and/or estuarine habitat in the occupied HSAs (Table E1). The CHART concluded that the occupied HSAs contained one or more PCEs (i.e. spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs. Table E2 summarizes the total miles of occupied estuarine habitat for each HSA watershed that contain spawning/rearing, rearing/migration, or migration PCEs, as well as management activities that may affect the PCEs in each HSA. Map E8 depicts the specific areas in this HU that are occupied by the ESU and under consideration for the critical habitat designation.

Within the range of the SC Steelhead ESU, which extends from the Santa Maria River southward to the U.S.- Mexico border, there are a large number of HSA watersheds and their associated subbasins (or HUs) that are not occupied. These unoccupied subbasins include the San Gabriel River, Los Angeles River, Santa Ana River, Santa Margarita River, San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River,

Otay River and Tijuana River. Because these areas are unoccupied and were not considered essential for conservation of the ESU by the team, they were not considered further in the designation process.

Final CHART Conservation Value Rating

Freshwater Areas

After reviewing the best available scientific data regarding critical habitat for this ESU, the CHART concluded that most of the occupied HSAs were of high or medium conservation value to the ESU. Of the 32 occupied HSAs that were evaluated, 21 were rated as having high conservation value, 6 were rated as having medium conservation value, and 5 were rated as having low conservation value. Table E3 summaries the CHARTs PCE/watershed scores and preliminary conservation value ratings (i.e. low, medium or high). Figure E9 shows the overall spatial distribution of conservation ratings by HSA watershed for the ESU.

Marine Areas

NMFS determined that marine areas did not warrant consideration as critical habitat for this ESU.

References and Sources of Information

NMFS 2003a. Updated Status of Federally Listed ESUs of West Coast Salmon and Steelhead. West Coast Salmon Biological Review Team; Northwest Fisheries Science Center and Southwest Fisheries Science Center. July 2003.

NMFS 2004b. Draft Findings of NMFS' Critical Habitat Development and Review Teams (CHARTs) for 7 Salmon and O. mykiss ESUs in California. Main Report and 7 Appendices. Prepared by NMFS Southwest Region.

Federal Register Notices

62 FR 43937 - Southern California Steelhead Listing Determination (1997)

67 FR 21586 - SC Steelhead Range Extension (2002)

69 FR 33102 - Proposed Listing Determinations for 27 West Coast Salmon and Steelhead ESUs (June 2004)

70 FR 37219 - 6-Month Extension of the Final Listing Determinations for 10 ESUs of west coast O. mykiss

Table E1. Southern California Steelhead ESU: Occupancy, miles of occupied habitat, and geographic area information by Hydrologic Unit and Hydrologic Subarea.

HU Number	HU Name	Major Stream / Watershed in HU	HU Occupied (Y or N)	Acres in HU (within ESU)	Square Miles in HU (within ESU)	Acres in HU (Total)	Percent of HU within ESU	Stream Miles (1:100k) in HU (within ESU)	Occupied Stream Miles	Occupied Stream Miles (Spawning)	Occupied Stream Miles (Rearing)	Occupied Stream Miles (Migration)	County HU Falls within	Acres of County in HU (within ESU)	Square Miles of County in HU (within ESU)	Percent of HU by County (within ESU)	HSA Number	HSA Name	HSA Occupied (Y or N)	Acres in HSA	Square Miles in HSA	Stream Miles (1:100k) in HSA
3312	Santa Maria River	Santa Maria Sisquoc River Cuyama River	Y	450,705	704	1,188,416	38%	1,079	220	171	178	220	San Luis Obispo Santa Barbara	42,046 408,654	66 639	9% 91%	**331210	Guadalupe	Y	152,234	238	220
																	331220	Sisquoc	Y	303,496	474	839
																	**331230	Cuyama Valley	Y	732,686	1,145	1,884
3313	San Antonio	San Antonio Creek	N	135,630	212	135,630	100%	242					Santa Barbara	135,520	212	100%	331300	SAME AS HUNAME	N	135,630	212	242
3314	Santa Ynez	Santa Ynez River	Y	310,545	485	576,064	54%	720	114	60	61	114	Santa Barbara	310,529	485	100%	331410	Lompoc	Y	71,470	112	115
																	331420	Santa Rita	Y	80,881	126	197
																	331430	Buellton	Y	53,579	84	99
																	**331440	Los Olivos	Y	102,891	160	303
																	**331451	Santa Cruz Creek	Y	264,128	413	808
																	331452	Lake Cachuma	N	3,235	5	20
3315	South Coast	Santa Barbara South Coast Streams	Y	240,101	375	240,101	100%	620	149	138	144	149	Ventura	7,096	11	3%	331510	Arguello	Y	139,409	218	369
													Santa Barbara	232,871	364	97%	331531	Goleta	Y	33,302	52	98
																	331532	Santa Barbara	Y	22,347	35	43
																	331533	Montecito	Y	12,420	19	32
																	331534	Carpinteria	Y	32,622	51	77
4401	Pitas Point	Los Sauces Creek	N	14,051	22	14,051	100%	29					Ventura	14,050	22	100%	440100	SAME AS HUNAME	N	14,051	22	29
4402	Ventura River	Ventura River	Y	103,441	162	144,672	72%	296	48	27	33	48	Ventura	103,441	162	100%	440210	Lower Ventura River	Y	24,576	38	58
																	**440220	Upper Ventura River	Y	90,324	141	265
																	440231	Upper Ojai	Y	8,149	13	19
																	440232	Ojai Valley	Y	21,622	34	67
4403	Santa Clara-Calleguas	Santa Clara River Sespe Creek	Y	790,865	1,236	1,037,178	76%	1,839	177	139	162	164	Santa Barbara Ventura Los Angeles	1,168 365,336 424,307	2 571 663	0% 46% 54%	440310	Oxnard Plain	Y	19,860	31	14
																	440321	Sulfer Springs	Y	66,041	103	170
																	440322	Sisar	Y	7,434	12	23
																	440331	Fillmore	Y	49,159	77	86
																	440332	Topa Topa	Y	160,438	251	493
																	440341	Santa Felicia	Y	78,076	122	160
																	440342	Upper Piru	N	169,192	264	469
																	440343	Hungry Valley	N	39,647	62	86
																	440344	Stauffer	N	37,475	59	88
																	440351	Eastern	N	291,841	456	615
																	440352	Bouquet	N	8,700	14	16
																	440353	Mint Canyon	N	10,838	17	28
																	440354	Sierra Pelona	N	9,678	15	16
																	440355	Acton	N	88,796	139	218
4404	Santa Monica Bay	Malibu Creek	Y	210,077	328	267,163	79%	222	11	5	9	3	Ventura Los Angeles	2,930 206,993	5 323	1% 99%	440411	Topanga Canyon	Y	12,575	20	30
																	440412	Tuna Canyon	N	1,016	2	3
																	440413	Pena Canyon	N	611	1	2
																	440414	Piedra Gorda Canyon	N	646	1	2
																	440415	Las Flores Canyon	N	2,899	5	6
																	440416	Carbon Canyon	N	2,328	4	5
																	440421	Monte Nido	Y	13,431	21	30
																	440422	La Virgenes Canyon	N	15,552	24	33
																	440423	Lindero Canyon	N	11,454	18	30
																	440424	Triunfo Canyon	N	10,063	16	23
																	440425	Russell Valley	N	9,280	15	25
																	440426	Sherwood	N	10,737	17	20
																	440431	Corral Canyon	N	4,300	7	8
																	440432	Solstice Canyon	N	2,842	4	8
																	440433	Latigo Canyon	N	814	1	3
																	440434	Escondido Canyon	N	2,300	4	6
																	440435	Ramera Canyon	N	3,339	5	8
																	440436	Zuma Canyon	N	6,356	10	13
																	440437	Trancas Canyon	N	6,550	10	13
																	440441	Encinal Canyon	N	1,799	3	4
																	440442	Los Alisos Canyon	N	2,405	4	6
																	440443	Nicholas Canyon	N	1,242	2	2
																	440444	Arroyo Senuit	Y	7,552	12	17
																	440450	Upper Santa Monica Bay	N	27,486	43	36
																	440461	Culver City	N	25,063	39	9
																	440462	Hollywood	N	22,830	36	
																	440463	Wilshire	N	35,765	56	2
																	440464	Marina Del Ray Harbor	N	409	1	
																	440470	Lower Santa Monica Bay	N	25,520	40	7
4405	San Gabriel River	San Gabriel River	N	229,862	359	378,771	61%	284					Orange San Bernardino Los Angeles	57 41 229,742	0 0 359	0% 0% 100%	440512	Alamitos Bay	N	619	1	
																	440515	Central (Split)	N	80,234	125	64
																	440520	Upper San Gabriel	N	101,714	159	137
																	440542	Lower Canyon	N	3,681	6	8
																	440543	Upper Canyon	N	145,228	227	379
																	440544	Foothill	N	13,201	21	35
																	440551	San Jose	N	6,639	10	8
																	440552	Pomona	N	6,367	10	7

4407	Buenaventura	Arundell Barranca	N	13,226	21	13,226	100%	23					Ventura	13,226	21	100%	440700	SAME AS HUNAME	N	13,226	21	23
4408	Calleguas	Calleguas Creek	Y	220,177	344	220,177	100%	463	1	0	0	1	Los Angeles	2,682	4	1%	440811	East of Oxnard	Y	24,500	38	11
													Ventura	217,276	339	99%	440812	Pleasant Valley	N	36,931	58	34
																	†440813	Point Mugu Lagoon	Y	110	0	0
																	†440813	Point Mugu Lagoon	N	248	0	
																	440821	West Las Posas	N	12,914	20	28
																	440822	East Las Posas	N	51,580	81	176
																	440823	Arroyo Santa Rosa	N	7,793	12	12
																	440824	Conejo Valley	N	17,706	28	43
																	440825	Tierra Rejada Valley	N	4,580	7	5
																	440826	Gillibrand	N	11,358	18	33
																	440827	Simi Valley	N	41,143	64	90
																	440828	Thousand Oaks	N	11,334	18	29
4409	Ventura Coastal Streams	Big Sycamore Canyon	N	22,476	35	22,476	100%	50					Los Angeles	1	0	0%	440901	Little Sycamore Canyon	N	3,791	6	8
													Ventura	22,476	35	100%	440902	Deer Canyon	N	2,273	4	4
																	440903	Big Sycamore canyon	N	13,614	21	32
																	440904	La Jolla Valley	N	2,798	4	7
4410	Oxnard	NA	N	18,721	29	18,721	100%						Ventura	18,506	29	100%	441000	SAME AS HUNAME	N	18,721	29	
4411	Dominguez Channel	Dominguez Channel	N	81,763	128	81,763	100%	22					Los Angeles	81,763	128	100%	441101	Carson	N	48,193	75	18
																	441102	San Pedro	N	25,853	40	4
																	441103	Terminal Island	N	2,111	3	
																	441104	Los Angeles Harbor	N	5,605	9	0
4412	Los Angeles River	Los Angeles River	N	379,521	593	533,851	71%	387					Ventura	6,159	10	2%	441210	Los Angeles	N	104,224	163	51
													Los Angeles	373,355	583	98%	441221	Bull Canyon	N	184,402	288	209
																	441222	Sylmar	N	29,198	46	61
																	441223	Tujunga	N	97,865	153	250
																	441224	Verdugo	N	13,874	22	32
																	441225	Eagle Rock	N	3,582	6	
																	441231	Pasadena	N	73,439	115	95
																	441232	Monk Hill	N	20,358	32	49
																	441233	Santa Anita	N	8,909	11	16
4481	Santa Ana River	San Antonio Creek Channel	N	975	2	16,686	6%	2					Orange	3	0	0%	448115	Yorba Linda (Split)	N	975	2	2
		Chino Creek											San Bernardino	0	0	0%	448121	Chino (Split)	N	9,257	14	7
													Los Angeles	972	2	100%	448122	Harrison	N	516	1	3
																	448123	Claremont Heights (Split)	N	5,938	9	15
4801	Santa Ana River	Santa Ana River	N	308,702	482	1,245,648	25%	451					Riverside	6,600	10	2%	480111	East Coastal Plain	N	194,573	304	210
													Los Angeles	21	0	0%	480112	Santiago	N	54,165	85	143
													Orange	289,055	452	94%	480113	Santa Ana Narrows	N	32,112	50	71
													San Bernardino	12,939	20	4%	480114	Newport Bay	N	1,610	3	0
																	480115	Yorba Linda (Split)	N	26,242	41	37
																	480121	Chino (Split)	N	190,514	298	253
																	480123	Claremont Heights (Split)	N	11,393	18	31
																	480124	Cucamonga	N	10,715	17	26
																	480125	Temescal	N	35,737	56	45
																	480126	Arlington	N	44,217	69	79
																	480127	Riverside	N	50,189	78	50
																	480131	Coldwater	N	10,441	16	15
																	480132	Bedford	N	31,760	50	85
																	480133	Cajalco	N	25,197	39	43
																	480134	Lee Lake	N	22,542	35	43
																	480135	Terra Cotta	N	14,216	22	25
																	480141	Upper Lytle	N	29,654	46	62
																	480142	Lower Lytle	N	5,760	9	23
																	480143	Rialto	N	4,577	7	7
																	480144	Colton	N	17,765	28	8
																	480145	Reche	N	7,074	11	15
																	480151	Cajon	N	36,201	57	87
																	480152	Bunker Hill	N	124,790	195	279
																	480153	Redlands	N	6,469	10	3
																	480154	Mentone	N	1,423	2	
																	480155	Reservoir	N	7,552	12	7
																	480156	Crafton	N	2,697	4	6
																	480157	Santa Ana Canyon	N	20,702	32	52
																	480158	Mill Creek	N	30,371	47	69
																	480159	Sycamore	N	4,158	6	18
																	480161	Yucaipa	N	7,729	12	16
																	480162	Beaumont	N	29,338	46	70
																	480163	Cherry Valley	N	4,890	8	6
																	480165	Gateway	N	3,563	6	11
																	480166	Oak Glen	N	12,063	19	22
																	480167	South Mesa	N	7,626	12	20
																	480168	Noble Creek	N	10,126	16	29
																	480171	Bear Valley	N	34,332	54	79
																	480172	Seven Oaks	N	56,351	91	143
																	480173	Baldwin	N	22,788	36	36
4845	San Gabriel River	Carbon Creek	N	55,644	87	55,644	100%	72					Los Angeles	81	0	0%	†484515	Central (Split)	N	79	0	6
		Fullerton Creek											Orange	53,573	84	96%	†484515	Central (Split)	N	436	1	
													San Bernardino	1,990	3	4%	†484515	Central (Split)	N	106	0	

4901	San Juan	San Mateo Creek San Juan Creek	Y	317,273	496	317,273	100%	743	21	15	18	21	San Diego Riverside Orange	96,683 54,498 166,091	151 85 260	30% 17% 52%
4902	Santa Margarita	Santa Margarita River	N	248,443	388	475,463	52%	525					Riverside San Diego	177,431 71,001	277 111	71% 29%
4903	San Luis Rey	San Luis Rey River	N	220,396	344	358,676	61%	436					San Diego Riverside	220,093 303	344 0	100% 0%
4904	Carlsbad	Escondido Creek	N	112,105	175	135,756	83%	173					San Diego	112,078	175	100%

†484515	Central (Split)	N	137	0	
†484515	Central (Split)	N	433	1	
†484515	Central (Split)	N	752	1	
484561	Anaheim	N	40,937	64	46
†484562	La Habra (Split)	N	10,770	17	20
†484562	La Habra (Split)	N	1,994	3	
490111	San Joaquin Hills	N	4,345	7	12
490112	Laguna Beach	N	6,780	11	16
490113	Aliso	N	22,862	36	52
490114	Dana Point	N	6,252	10	12
490121	Oso	N	11,117	17	26
490122	Upper Trabuco	N	12,855	20	34
490123	Middle Trabuco	Y	10,047	16	31
490124	Gobernadora	N	11,210	18	24
490125	Upper San Juan	N	50,858	79	135
490126	Middle San Juan	N	4,302	7	11
490127	Lower San Juan	Y	8,044	13	13
490128	Ortega	N	4,921	8	6
490131	Prima Deshecha	N	5,441	9	3
490132	Segunda Deshecha	N	7,289	11	13
490140	San Mateo Canyon	Y	85,470	134	199
490151	San Onofre Valley	N	37,403	58	86
490152	Las Pulgas	N	19,214	30	46
490153	Stuart	N	8,863	14	25
490211	Lower Ysidora	N	9,043	14	13
490212	Chappo	N	7,814	12	7
490213	Upper Ysidora	N	11,107	17	25
490221	Deluz Creek	N	37,958	59	76
490222	Gavilan	N	28,956	45	80
490223	Vallecitos	N	6,059	9	9
490231	Wildomar	N	13,114	20	27
490232	Murrieta	N	32,147	50	72
490233	French	N	20,684	32	44
490234	Lower Domenigoni	N	3,151	5	3
490235	Domenigoni	N	6,559	10	3
490236	Diamond	N	7,082	11	4
490241	Bachelor Mountain	N	21,879	34	52
490242	Gertrudis	N	20,730	32	47
490243	Lower Tucalota	N	6,735	11	11
490244	Tucalota	N	9,662	15	13
490251	Pauba	N	17,232	27	37
490252	Wolf	N	12,206	19	26
490261	Lancaster Valley	N	14,447	23	26
490262	Lewis	N	9,950	16	12
490263	Reed Valley	N	15,486	24	29
490271	Lower Coahuila	N	13,257	21	22
490272	Upper Coahuila	N	11,235	18	25
490273	Anza	N	24,781	39	28
490274	Burnt	N	2,329	4	3
490281	Vail	N	21,426	33	54
490282	Devils Hole	N	5,981	9	13
490283	Redec	N	12,958	20	31
490284	Tule Creek	N	23,266	36	56
490291	Lower Culp	N	9,432	15	20
490292	Previlt Canyon	N	26,136	41	46
490293	Dodge	N	7,154	11	24
490294	Chihuahua	N	5,704	9	12
490311	Mission	N	30,213	47	55
490312	Bonsall	N	65,493	102	124
490313	Moosa	N	12,794	20	18
490314	Valley Center	N	4,330	7	6
490315	Woods	N	1,915	3	2
490316	Rincon	N	4,927	8	13
490321	Pala	N	35,307	55	67
490322	Pauma	N	54,733	86	120
490323	La Jolla Amago	N	16,928	26	40
490331	Warner	N	124,038	194	275
490332	Combs	N	7,996	12	18
490410	Loma Alta	N	6,283	10	14
490421	El Salto	N	7,464	12	7
490422	Vista	N	6,982	11	10
490431	Los Monos	N	13,686	21	22
490432	Buena	N	6,050	9	13
490440	Encinas	N	2,547	4	4
490451	Batiquitos	N	19,502	30	26
490452	Richland	N	12,864	20	15
490453	Twin Oaks	N	5,663	9	12
490461	San Elijo	N	20,371	32	39
490462	Escondido	N	29,219	46	37
490463	Lake Wohlford	N	5,124	8	10

4905	San Dieguito	San Dieguito River	N	187,010	292	221,563	84%	365	San Diego	187,008	292	100%	490511	Rancho Santa Fe	N	22,966	36	36
													490512	La Jolla	N	5,760	9	12
													490521	Del Dios	N	21,108	33	30
													490522	Green	N	5,627	9	8
													490523	Felicita	N	1,820	3	3
													490524	Bear	N	1,716	3	3
													490531	Highland	N	2,552	4	4
													490532	Las Lomas Muertas	N	23,955	37	46
													490533	Reed	N	1,907	3	5
													490534	Hidden	N	1,193	2	2
													490535	Guejito	N	12,659	20	33
													490536	Vineyard	N	1,796	3	3
													490541	Ramona	N	25,851	40	43
													490542	Lower Hatfield	N	2,835	4	7
													490543	Wash Hollow	N	2,315	4	5
													490544	Upper Hatfield	N	1,019	2	2
													490545	Ballena	N	2,494	4	7
													490546	East Santa Teresa	N	882	1	2
													490547	West Santa Teresa	N	1,143	2	2
													490551	Boden	N	10,531	16	26
													490552	Pamo	N	36,879	58	87
													490553	Sutherland	N	18,511	29	35
													490554	Witch Creek	N	16,042	25	30
4906	Penasquitos	Poway Creek	N	103,794	162	103,794	100%	187	San Diego	103,794	162	100%	490610	Miramar Reservoir	N	33,329	52	62
													490620	Poway	N	27,094	42	63
													490630	Scripps	N	8,446	13	
													490640	Miramar	N	25,180	39	51
													490650	Tecolote	N	6,257	10	10
													490660	Vacation Isle	N	126	0	
													490670	Fiesta Island	N	1,046	2	0
													490680	Mission Bay	N	2,317	4	0
4907	San Diego	San Diego River	N	223,702	350	278,987	80%	409	San Diego	223,690	350	100%	490711	Mission San Diego	N	37,058	58	45
													490712	Santee	N	40,148	63	67
													490713	El Cajon	N	15,485	24	16
													490714	Coches	N	10,050	16	23
													490715	El Monte	N	8,260	13	15
													490721	Fernbrook	N	14,078	22	36
													490722	Kimball	N	8,491	13	18
													490723	Gower	N	14,854	23	42
													490724	Barona	N	10,202	16	19
													490731	Conejos Creek	N	51,820	81	110
													490733	Alpine	N	3,905	6	11
													490741	Inaja	N	52,197	82	109
													490742	Spencer	N	4,758	7	13
													490743	Cuyamaca	N	7,660	12	11
4908	Pueblo San Diego	Chollas Creek	N	37,547	59	37,547	100%	37	San Diego	37,475	59	100%	490810	Point Loma	N	4,417	7	
													490821	Lindbergh	N	5,192	8	
													490822	Chollas	N	21,489	34	26
													490831	El Toyan	N	1,963	3	4
													490832	Paradise	N	4,487	7	6
4909	Sweetwater	Sweetwater River	N	30,552	48	146,787	21%	47	San Diego	30,472	48	100%	490911	Telegraph	N	5,346	8	10
													490912	La Nacion	N	25,205	39	37
													490921	Jamacha	N	40,520	63	91
													490922	Hillsdale	N	1,375	2	1
													490923	Dehesa	N	4,567	7	11
													490924	Galloway	N	1,517	2	3
													490925	Sequan	N	2,925	5	6
													490926	Alpine Heights	N	2,581	4	5
													490931	Loveland	N	24,666	39	49
													490932	Japatul	N	1,494	2	3
													490933	Viejas	N	8,382	13	13
													490934	Descanso	N	14,344	22	24
													490935	Garnet	N	13,861	22	26
4910	Otay	Otay River	N	35,129	55	98,384	36%	62	San Diego	35,044	55	100%	491010	Coronado	N	5,561	9	
													491020	Otay Valley	N	29,568	46	62
													491031	Savage	N	10,220	16	29
													491032	Proctor	N	8,129	13	25
													491033	Jamul	N	7,795	12	29
													491034	Lee	N	2,075	3	7
													491035	Lyon	N	2,076	3	4
													491036	Hollenbeck	N	31,728	50	96
													491037	Engineer Springs	N	1,233	2	3
4911	Tijuana	Tijuana River Cottonwood Creek	N	73,378	115	299,193	25%	124	San Diego	73,339	115	100%	491111	San Ysidro	N	10,183	16	13
													491112	Water Tanks	N	9,582	15	5
													491121	Marron	N	9,805	15	11
													491122	Bee Canyon	N	3,283	5	7
													491123	Barrett	N	27,307	43	64
													491124	Round Potrero	N	1,969	3	3
													491125	Long Potrero	N	11,250	18	22
													491130	Barrett Lake	N	59,133	92	124

*4912	San Diego Bay	San Diego Bay	N	10,931	17	10,931	100%	0	San Diego	246	0	2%

491141	Pine	N	18,805	29	44
491142	Mount Laguna	N	5,322	8	9
491150	Morena	N	14,917	23	26
491160	Cottonwood	N	28,561	45	50
491170	Cameron	N	30,068	47	48
491181	Tecate	N	5,395	8	
491182	Canyon City	N	32,045	50	17
491183	Clover Flat	N	17,404	27	22
491184	Hill	N	7,471	12	9
491185	Hipass	N	6,693	10	
491200	SAME AS HUNAME	N	10,931	17	0

*HU #4912 encompasses San Diego Bay, which is almost entirely outside the county boundary (except for small areas of overlap). Therefore, the percentage of the HU within the county is very low.
**The HSA's listed below were bisected by the ESU boundary. The following values pertain to the portion of the HSA within the ESU boundary.

HSA #	Square Miles in HSA (within ESU)	Acres in HSA (within ESU)	Stream Miles (1:100k) in HSA (within ESU)
331210	206	132,990	208
331230	22	14,220	32
331440	158	101,306	299
331451	5	3,209	10
440220	77	49,093	152

† These entries contain multiple polygons for the same HSA #. Only one total stream mileage was given for the entire HSA.

Table E2. Summary of Occupied Subbasins/Watersheds. PCE's and Management Activities Affecting PCE's for the Southern California Steelhead ESU

Map Code	Basin	Watershed	CalWater Unit (HSA)	Spawning/Rearing PCEs (mi)**	Rearing/Migration PCEs (mi)**	Presence/Migration Only PCEs (mi)**	Management Activities***
	Santa Maria	Santa Maria	331210	0	27	27	D, I
	Santa Maria	Sisquoc	331220	175	186	186	S, G, H
	Santa Maria	Cuyama	331230	3	7	7	D
	Santa Ynez	Mouth of Santa Ynez	331410	2	18	18	D
	Santa Ynez	Santa Ynez, Salsipuedes	331420	20	36	36	G, I, R
	Santa Ynez	Santa Ynez, Zaca	331430	13	33	33	G, U, B
	Santa Ynez	Santa Ynez to Bradbury	331440	26	26	26	G, B, D
	Santa Ynez	Hilton	331451				
	South Coast	Arroyo Hondo	331510	58	59	59	A, B
	South Coast	UCSB Slough	331531	35	38	38	B, U, A, W
	South Coast	Mission	331532	15	17	17	U, B, I
	South Coast	San Ysidro	331533	13	13	13	U, B, R
	South Coast	Carpinteria	331534	23	23	23	R, A, B
	Ventura River	Ventura	440210	6	18	18	D, O, U, A, X
	Ventura River	Ventura	440220	20	23	23	I, A, U, X, D
	Ventura River	Lions	440231	5	5	5	A, U, B, X
	Ventura River	Thatcher	440232	2	2	2	B, I, A
	Santa Clara-Calleguas	Mouth of Santa Clara	440310	0	8	8	I, A, U
	Santa Clara-Calleguas	Santa Clara, Santa Paula	440321	13	19	19	D, I, A, U, B
	Santa Clara-Calleguas	Sisar	440322	5	5	5	B
	Santa Clara-Calleguas	Sespe, Santa Clara	440331	16	16	16	I, D
	Santa Clara-Calleguas	Sespe	440332	111	113	101	X, F
	Santa Clara-Calleguas	Santa Clara, Hopper Canyon, Piru	440341	16	16	16	D
	Santa Monica Bay	Topanga	440411	4	4	1	R, U
	Santa Monica Bay	Malibu	440421	3	3	1	U, D
	Santa Monica Bay	Arroyo Sequit	440444	3	4	1	R, B, C
	Calleguas	Callegus	440811	0	1	1	A, C
	Calleguas	Calleguas Estuary	440813				A, U
	San Juan	Trabuco	490121				
	San Juan	Upper Trabuco	490122				
	San Juan	Middle Trabuco	490123	0	1	1	R, U
	San Juan	Middle San Juan	490124				
	San Juan	Upper San Juan	490125				
	San Juan	Mid-upper San Juan	490126				
	San Juan	Lower San Juan	490127	2	5	5	R, U, B
	San Juan	Middle San Juan	490128				
	San Juan	San Mateo	490140	15	16	16	X, I, A

*Total Stream Miles calculated from blueline streams represented on 1:100,000 USGS Topographic Maps

**Overlap of stream miles may occur between the three habitat types

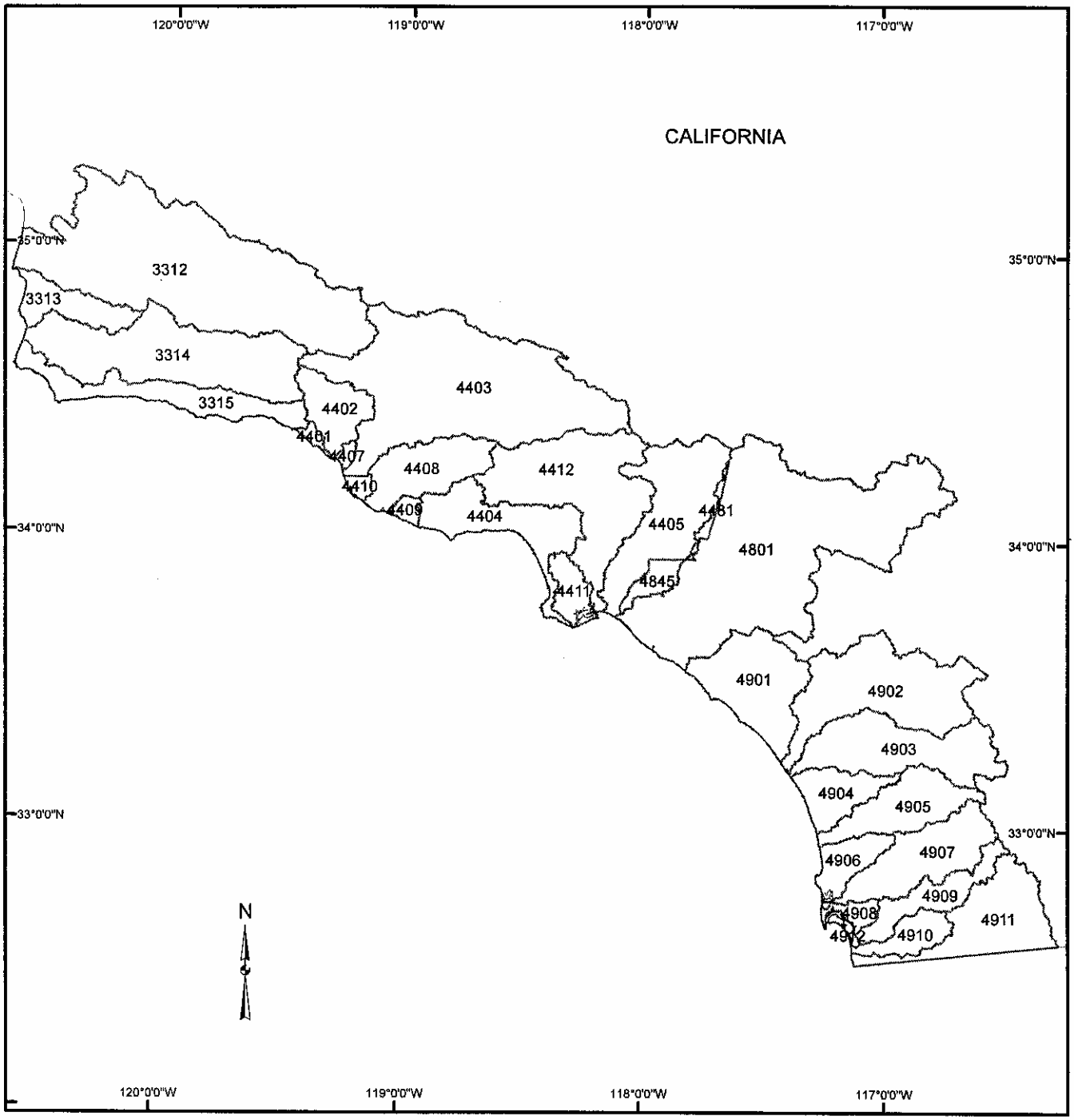
***Management Activities Codes:
A = Agriculture
B = Barriers / impediments
C = Channel modifications / flood control structures
D = Large water storage dams
F = Forest management and activities
G = Grazing
H = Species harvest and/or hatchery stocking
I = Irrigation / water diversions and withdrawals
M = Mineral mining
O = Oil and gas development
R = Roads
S = Sand and gravel mining
U = Urbanization / development
W = Wetland loss
X = Exotic/invasive species introduction

Table E3. Summary of Scores and Overall Rankings of Conservation Values for Critical Habitat for HSA watersheds occupied by the Southern California Steelhead ESU

Map Code	Basin	Watershed	Calwater Unit	Total Score (0-18)	Comments / Other Considerations	Conservation Value
	Santa Maria	Santa Maria	331210	6		Low
	Santa Maria	Sisquoc	331220	11		High
	Santa Maria	Cuyama	331230	7		Low
	Santa Ynez	Mouth of Santa Ynez	331410	11		High
	Santa Ynez	Santa Ynez, Salsipuedes	331420	11		High
	Santa Ynez	Santa Ynez, Zaca	331430	7		Low
	Santa Ynez	Santa Ynez to Bradburry	331440	10		Medium
	Santa Ynez	Hilton	331451	8		Medium
	South Coast	Arroyo Hondo	331510	11		High
	South Coast	UCSB Slough	331531	11		High
	South Coast	Mission	331532	12		High
	South Coast	San Ysidro	331533	11		High
	South Coast	Carpinteria	331534	11		High
	Ventura River	Ventura	440210	12		High
	Ventura River	Ventura	440220	12		High
	Ventura River	Lions	440231	9		Medium
	Ventura River	Thatcher	440232	9		Medium
	Santa Clara-Calleguas	Mouth of Santa Clara	440310	10		Medium
	Santa Clara-Calleguas	Santa Clara, Santa Paula	440321	11		High
	Santa Clara-Calleguas	Sisar	440322	12		High
	Santa Clara-Calleguas	Sespe, Santa Clara	440331	12		High
	Santa Clara-Calleguas	Sespe	440332	13		High
	Santa Clara-Calleguas	Santa Clara, Hopper Canyon, Piru	440341	11		High
	Santa Monica Bay	Topanga	440411	11		High
	Santa Monica Bay	Malibu	440421	13		High
	Santa Monica Bay	Arroyo Sequit	440444	12		High
	Calleguas	Callegus	440811	3		Low
	Calleguas	Callegus estuary	440813	4		Low
	San Juan	Middle Trabuco	490123	11		High
	San Juan	Lower San Juan	490127	11		High
	San Juan	San Mateo	490140	12		High

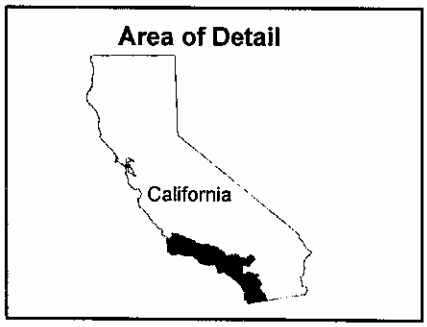
Figures E1 and E2: CALWATER Hydrologic Units and Hydrologic Subareas within the Range of the Southern California Steelhead ESU

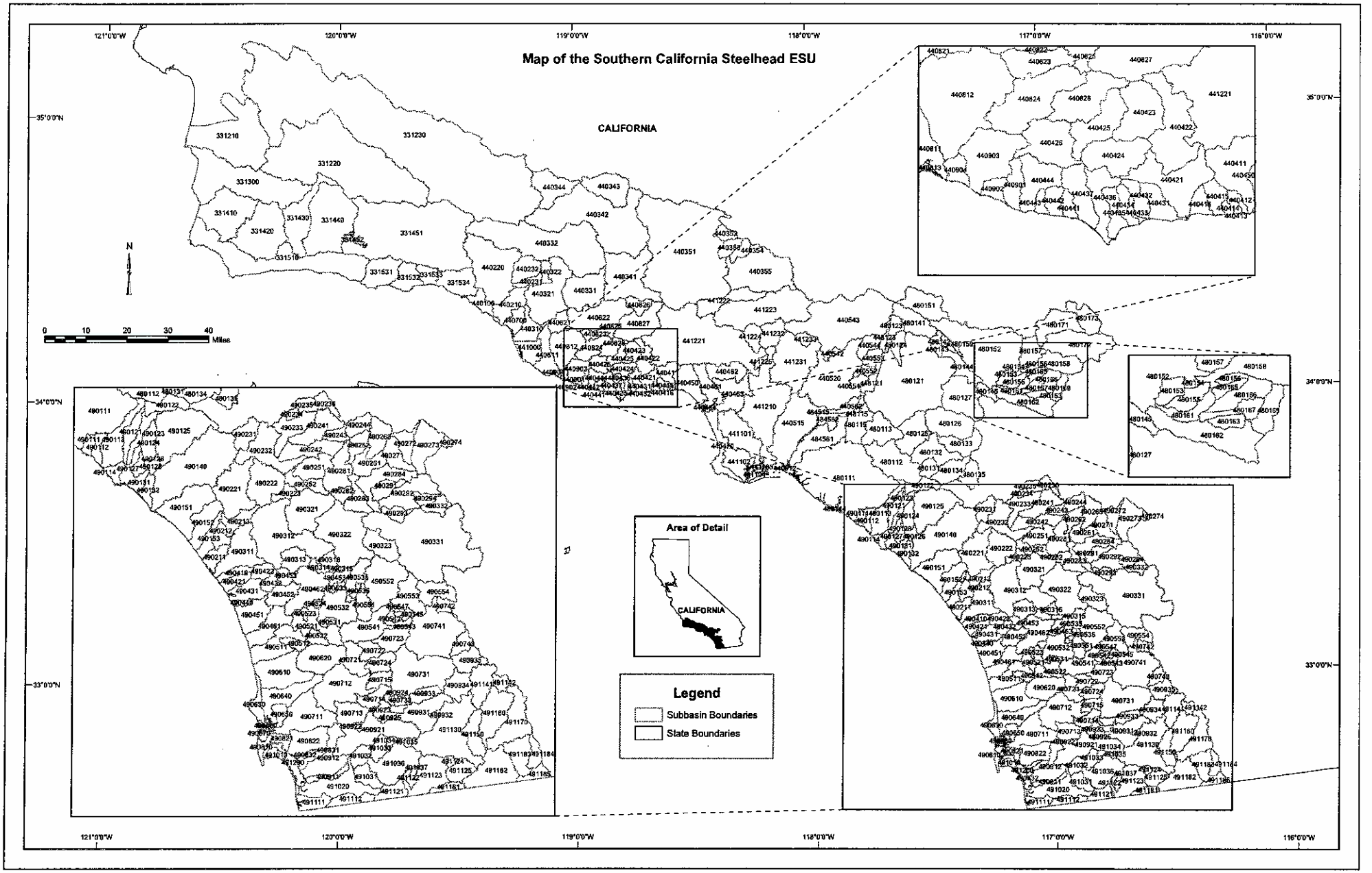
Map of the Southern California Steelhead ESU



Hydrologic Unit Boundaries

State Boundary




Map of the Southern California Steelhead ESU
CALIFORNIA
121°0'0"W
120°0'0"W
119°0'0"W
118°0'0"W
117°0'0"W
116°0'0"W
35°0'0"N
34°0'0"N
33°0'0"N
N
0 10 20 30 40
Miles
Area of Detail
CALIFORNIA
Legend
Subbasin Boundaries
State Boundaries

Maps E1 through E8: Southern California Steelhead ESU - Habitat Areas (Units) Considered for Critical Habitat Designation

E1 - Unit 3312 (Santa Maria River HU)

E2 - Unit 3314 (Santa Ynez HU)

E3 - Unit 3315 (South Coast HU)

E4 - Unit 4402 (Ventura River HU)

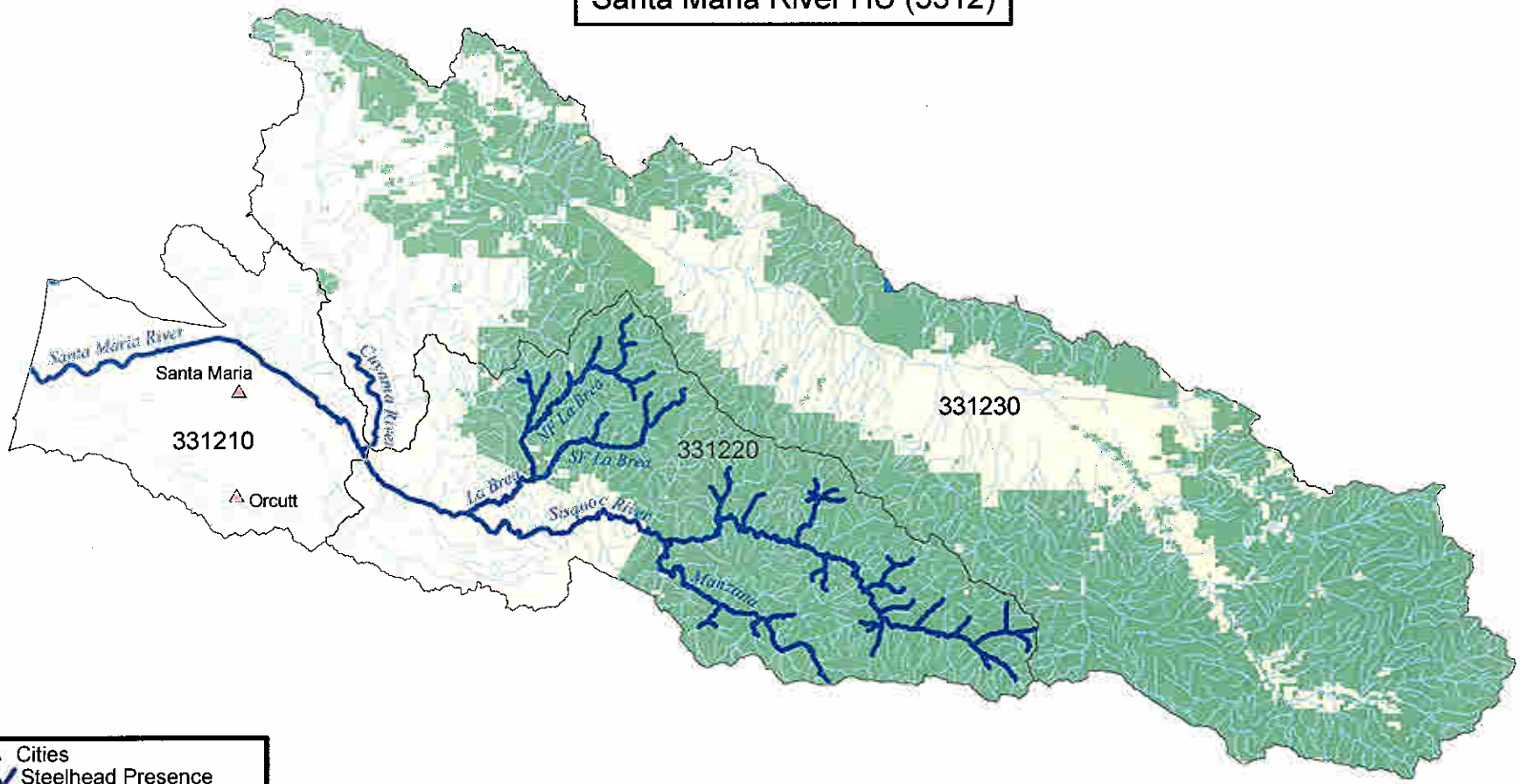
E5 - Unit 4403 (Santa Clara-Calleguas HU)

E6 - Unit 4404 (Santa Monica Bay HU)

E7 - Unit 4408 (Calleguas HU)

E8 - Unit 4901 (San Juan HU)

Land Ownership
Southern California Steelhead
Santa Maria River HU (3312)



△ Cities
Steelhead Presence Streams
Hydrologic Unit Boundary

Land Ownership*

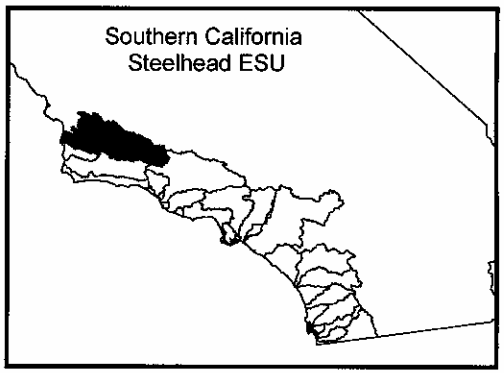
Tribal
Federal
State/Local
Private/Other
Water

*Source: California Environmental Resources Evaluation System (CERES), 1999

Note: This map is for general reference only

N

0 3 6 9 12 Miles



Land Ownership
Southern California Steelhead
Santa Ynez HU (3314)

- Cities
- Steelhead Presence Streams
- Hydrologic Unit Boundary

Land Ownership*

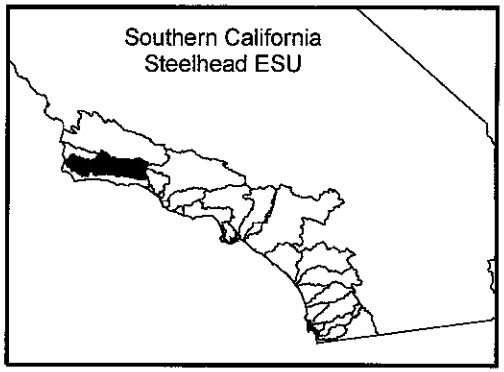
- Tribal
- Federal
- State/Local
- Private/Other
- Water

*Source: California Environmental Resources Evaluation System (CERES), 1999

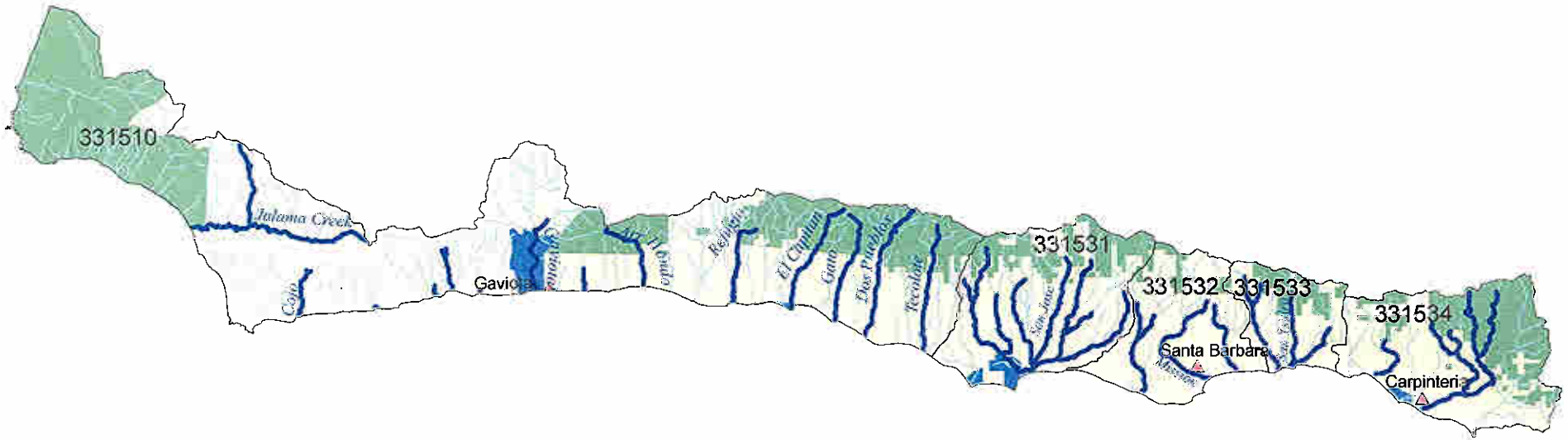
Note: This map is for general reference only

N

0 2.5 5 7.5 10 Miles



Land Ownership
Southern California Steelhead
South Coast HU (3315)



- Cities
- Steelhead Presence Streams
- Hydrologic Unit Boundary

Land Ownership*

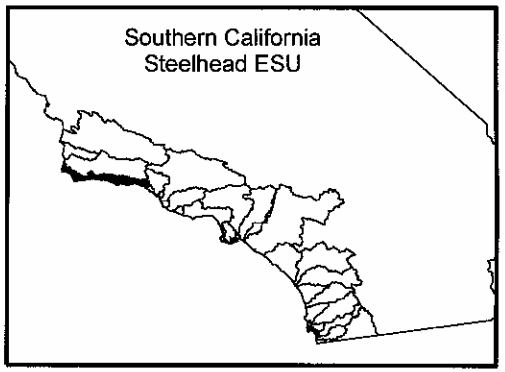
- Tribal
- Federal
- State/Local
- Private/Other
- Water

*Source: California Environmental Resources Evaluation System (CERES), 1999

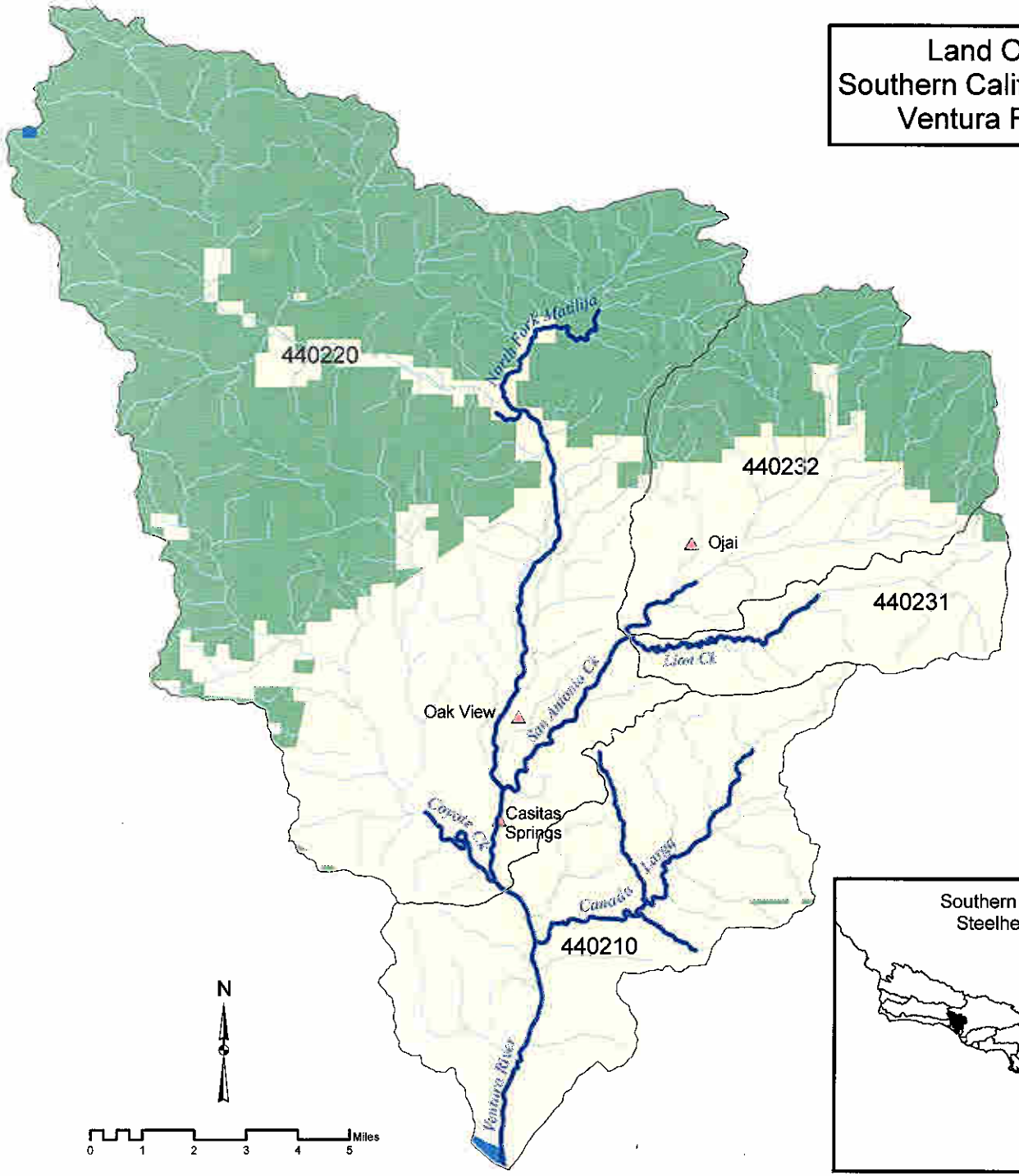
Note: This map is for general reference only

N

0 2.5 5 7.5 10 Miles



Land Ownership
Southern California Steelhead
Ventura River (4402)



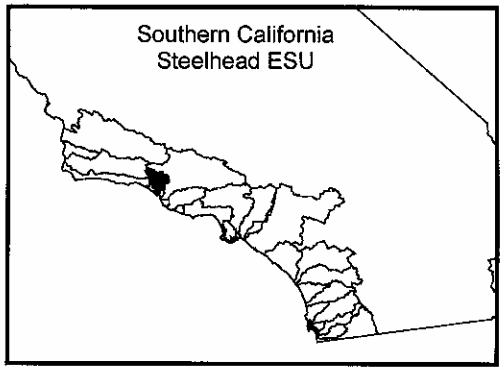
- Cities
- Steelhead Presence Streams
- Hydrologic Unit Boundary

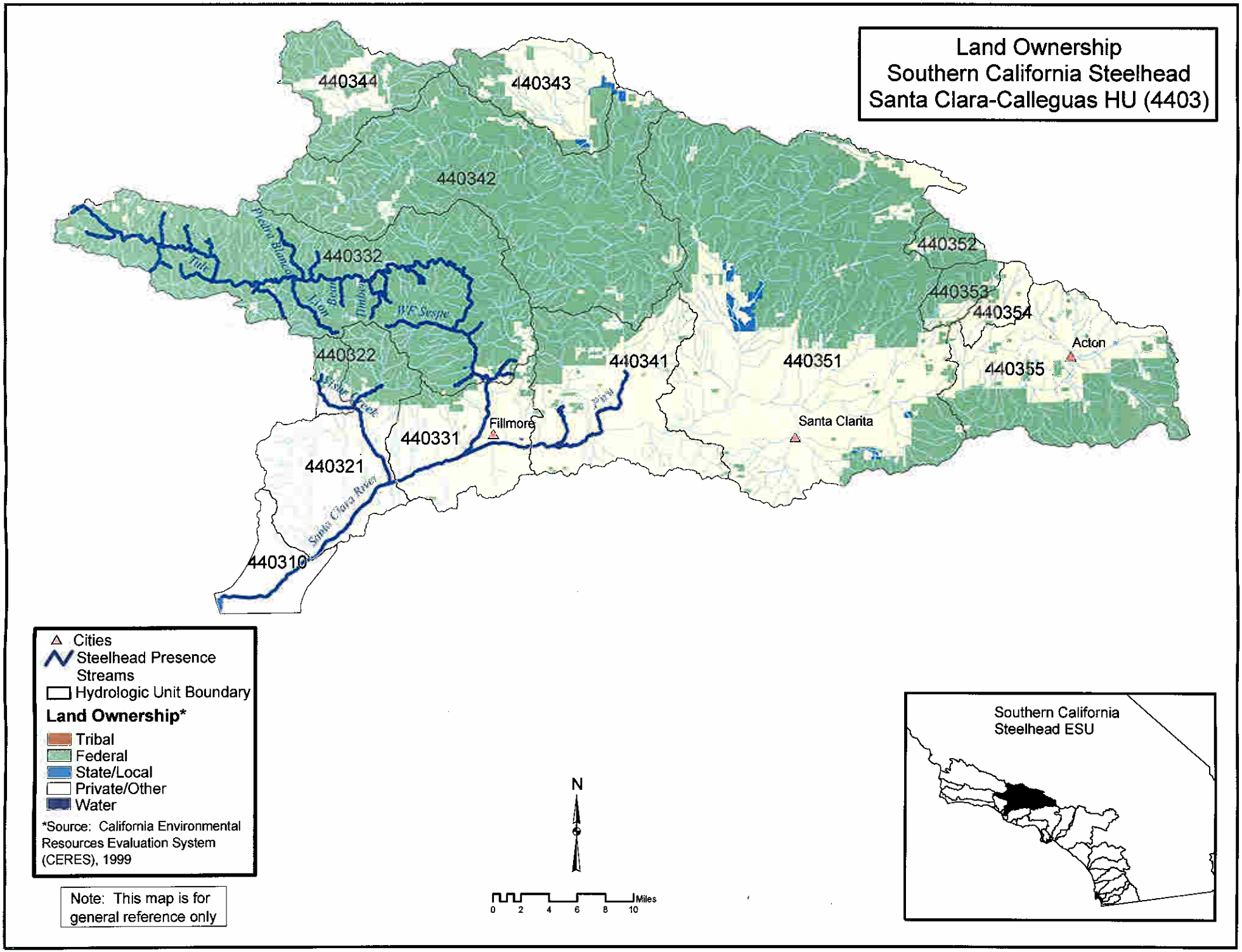
Land Ownership*

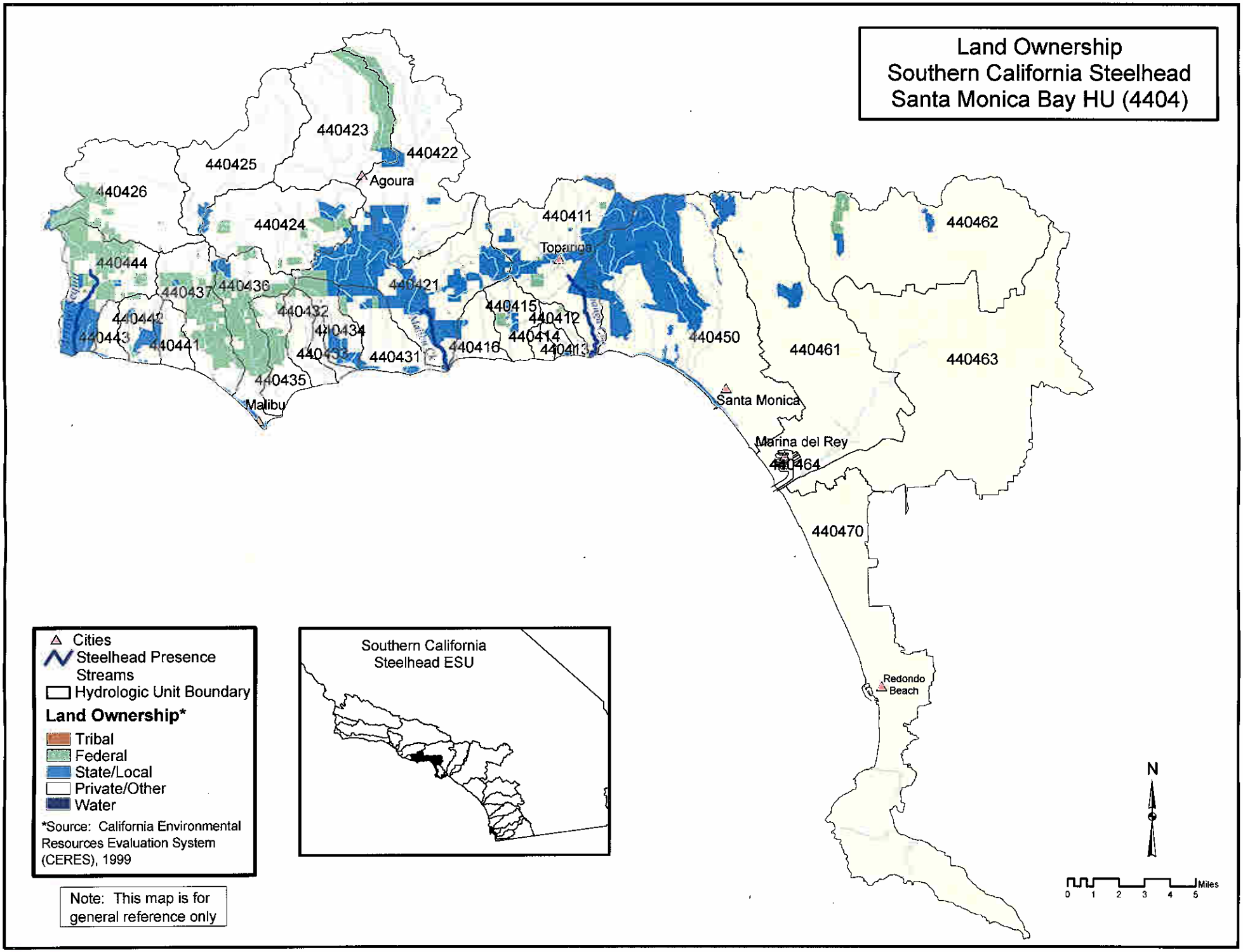
- Tribal
- Federal
- State/Local
- Private/Other
- Water

*Source: California Environmental Resources Evaluation System (CERES), 1999

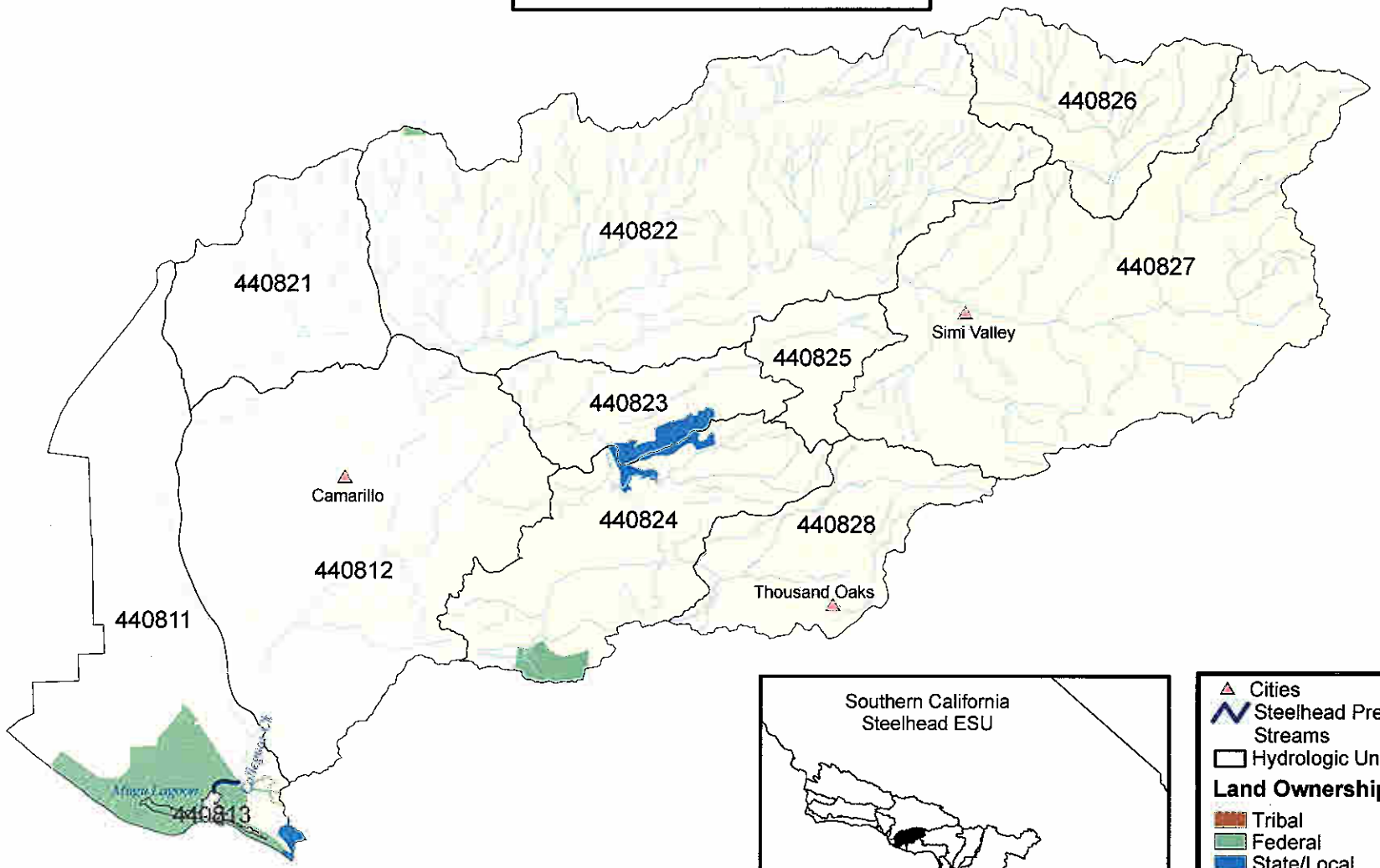
Note: This map is for general reference only

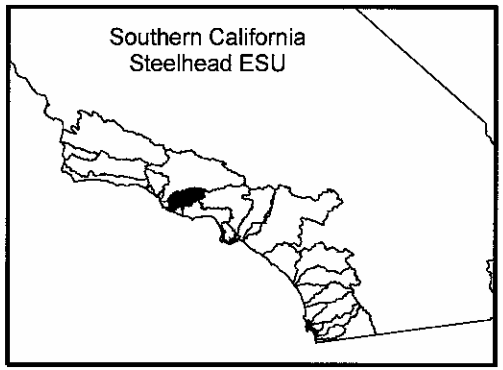



Land Ownership
Southern California Steelhead
Santa Clara-Calleguas HU (4403)
440344
440343
440342
440332
440322
440341
440351
440352
440353
440354
440355
440331
440321
440310
Piedra Blanca
Trib
Lion Head
Timber
W.F. Sespe
Sespe Creek
Piru
Santa Clara River
Fillmore
Santa Clarita
Acton
Cities
Steelhead Presence Streams
Hydrologic Unit Boundary
Land Ownership*
Tribal
Federal
State/Local
Private/Other
Water
*Source: California Environmental Resources Evaluation System (CERES), 1999
Note: This map is for general reference only
N
0 2 4 6 8 10 Miles
Southern California Steelhead ESU


Land Ownership
Southern California Steelhead
Santa Monica Bay HU (4404)
440423
440422
440425
Agoura
440426
440424
440411
Topanga
440462
440444
440437
440436
440421
440415
440412
440442
440432
440434
440414
440443
440441
440433
440431
440416
440413
440450
440461
440463
440435
Malibu
Santa Monica
Marina del Rey
440464
440470
Redondo Beach
Cities
Steelhead Presence Streams
Hydrologic Unit Boundary
Land Ownership*
Tribal
Federal
State/Local
Private/Other
Water
*Source: California Environmental Resources Evaluation System (CERES), 1999
Southern California Steelhead ESU
N
0 1 2 3 4 5 Miles
Note: This map is for general reference only

Land Ownership
Southern California Steelhead
Calleguas HU (4408)





- Cities
- Steelhead Presence Streams
- Hydrologic Unit Boundary

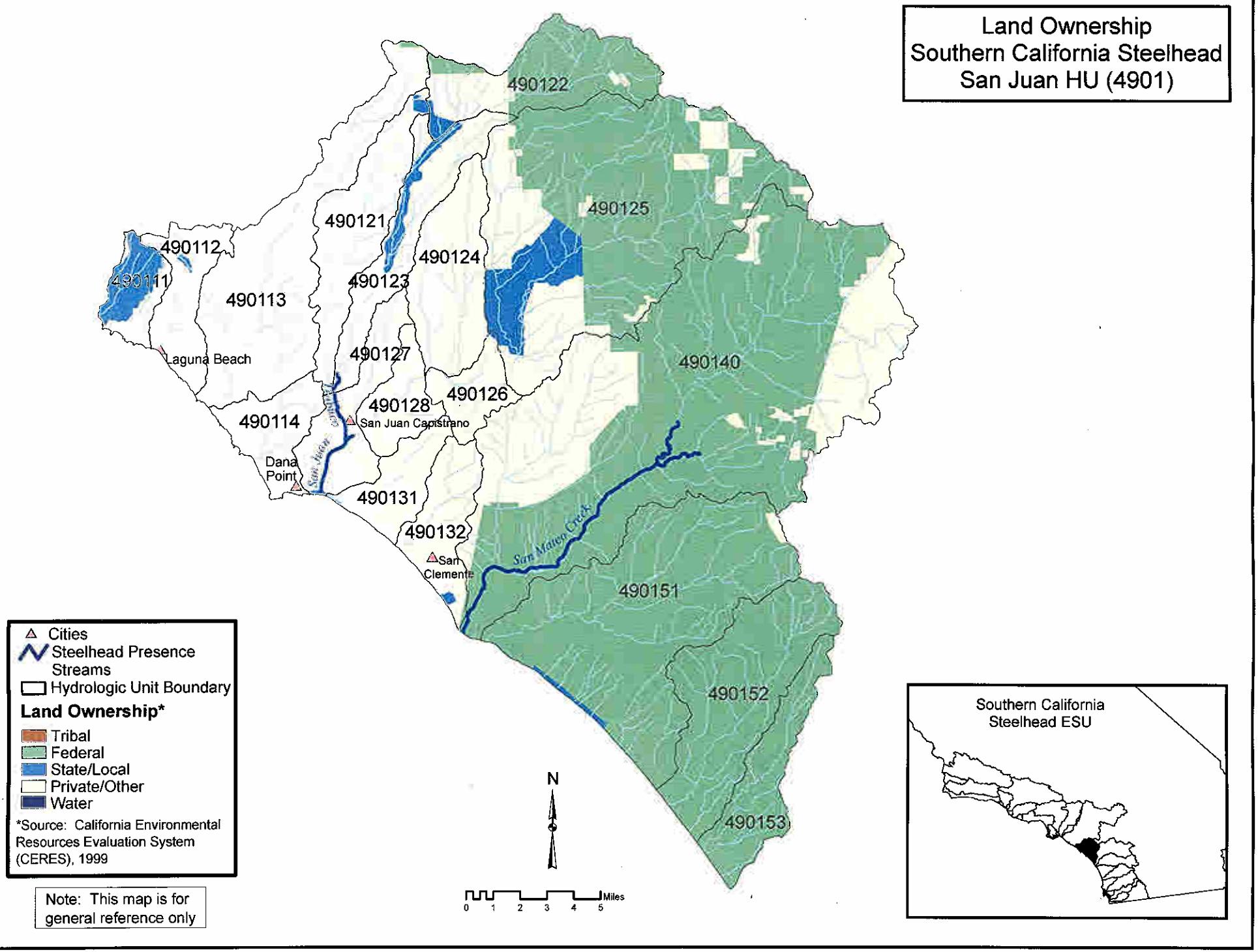
Land Ownership*

- Tribal
- Federal
- State/Local
- Private/Other
- Water

*Source: California Environmental Resources Evaluation System (CERES), 1999

Note: This map is for general reference only

Land Ownership
Southern California Steelhead
San Juan HU (4901)



Map E9. Preliminary CHART Ratings of Conservation Value for CALWATER HSA Watersheds occupied by the Southern California Steelhead ESU

Southern California Steelhead
Watershed Conservation Rating

Map of the fifth- field watersheds occupied by the
Southern California Steelhead Evolutionarily Significant Unit
(ESU) and eligible for designation as critical habitat.